

LEE -- Application No. 10/747,621  
Attorney Docket: 025403-0307457

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended): A method of forming device isolation structures in an embedded semiconductor device comprising the steps of:

providing a semiconductor substrate having a first area for a power device in which a first type impurity ions are implanted and a second area for a logic device; in which ions are implanted;

forming a first device isolation region through partial oxidation in the first area;

forming a first type well with deep junction by diffusing the ions in the first area;

forming a second device isolation region with a trench in [[a]]the second area of the semiconductor substrate;

forming a first type well with shallow junction in peripheral regions of the second device isolation structure and a region between the first device isolation structure and the second device isolation structure;

forming a second type well with shallow junction in peripheral regions of the first device isolation structure and a region of the second device isolation structure; and

defining first and second type active regions on the semiconductor substrate.

2. (Original): The method as defined by claim 1, wherein the diffusion of ions is simultaneously conducted when the partial oxidation is performed.

3. (Original): The method as defined by claim 1, wherein the first type well is an n-type well and the second type well is a p-type well.